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August 10, 2009

Ms. Jackie Drummond
North Carolina Department of Environment and Natural Resources
Division of Waste Management, Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

RE: Notification of Appendix II Constituent Detections and Notification of NC-2L Groundwater Standard Exceedances
Granville County – Closed Butner Landfill
Permit No. 39-02
JEI Project No. 660.06, Task 27

Dear Ms. Drummond:

On behalf of Granville County, Joyce Engineering, Inc. is submitting this notification of exceedances of 15A-NCAC-2L (NC-2L) groundwater standards at the Granville County – Butner Landfill, Permit No. 39-02 in accordance with Title 15A, Chapter 13, Subchapter 13B, Section .1634 (g) of the North Carolina Solid Waste Management Regulations. The first semiannual sampling event of 2009 at the Butner Landfill took place on July 9, 2009. The samples were sent to Pace Analytical Services, Inc., where the groundwater samples were analyzed for all constituents listed in NCSWMR Appendix II. The attached table summarizes the detected constituents from the first semiannual sampling event of 2009.

The results indicate exceedances of NC-2L standards for cobalt in monitoring well MW-5 and benzene in MW-2R; however these detections do not appear to represent statistically significant increases (SSI) above the background. Organic compound chlorobenzene was detected in one or more monitoring wells at quantifiable concentrations during the July 2009 event; however, none of these were above the NC-2L Standard. Other inorganic constituents detected at quantifiable concentrations during the July 2009 event include arsenic, barium, cadmium, cyanide, and nickel.

These results are consistent with previous results for this facility; however, a complete data quality review has not been completed, nor have the initial statistical analyses been validated, so these results are considered preliminary. A complete groundwater monitoring and statistical analysis report will follow. If you have any questions or need additional information, please feel free to contact me or Evan Andrews at (336) 323-0092.

Sincerely,
JOYCE ENGINEERING, INC.

Van Burbach, Ph.D., PG
Technical Consultant

Attachment

Copy: Jason Falls, Granville County
JEI File

TABLE 1: Detected Constituents - First Semiannual Sampling Event of 2009

	Sample Date:		07/09/2009	07/09/2009	07/09/2009	07/09/2009	07/09/2009	07/09/2009	07/09/2009	07/09/2009	07/09/2009	07/09/2009
Parameter	**SWSL**	**NC-2L**	**3902-MW1R**	**3902-MW2R**	**3902-MW3R**	**3902-MW4**	**3902-MW5**	**3902-MW6**	**3902-NES-1**	**3902-SW1**	**3902-SW2**	**Blanks**
Arsenic	10	50	ND	13.5	10.9	5.6 J	ND	4.0 J	ND	ND	ND	ND
Barium	100	2000	4.6 B	121	63.4 B	0.37 B	81.4 B	0.94 B	72.4 B	36.8 B	78.4 B	17.6 J
Beryllium	1	4*	ND	0.18 J	0.22 J	0.17 J	ND	ND	0.23 J	ND	ND	ND
Cadmium	1	1.75	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	10	50	1.2 J	2.4 J	1.1 J	1.6 J	0.68 J	0.53 J	4.8 J	2.6 J	1.2 J	ND
Cobalt	10	70*	ND	6.2 J	ND	ND	**100**	ND	2.2 J	ND	ND	ND
Copper	10	1000	ND	ND	6.3 J	ND	5.7 J	ND	8.8 J	ND	ND	ND
Nickel	50	100	2.2 J	93.5	29.4 J	11.7 J	23.2 J	ND	13.1 J	4.1 J	12.3 J	ND
Selenium	10	50	ND	ND	4.2 J	ND	ND	ND	ND	ND	ND	ND
Silver	10	17.5	ND	0.84 J	0.63 J	0.45 J	ND	0.11 J	ND	ND	0.10 J	ND
Thallium	5.5	0.28*	ND	ND	ND	4.1 J	ND	ND	ND	ND	ND	ND
Tin	100	-	ND	21.4 J	8.6 J	ND	ND	ND	NS	NS	NS	ND
Vanadium	25	3.5*	3.9 J	9.7 J	2.5 B	18.4 J	2.9 B	2.2 B	8.5 J	5.0 B	3.4 B	1.3 J
Zinc	10	1050	3.4 B	ND	ND	ND	ND	ND	6.1 B	ND	4.9 B	1.6 J
Cyanide	10	70	ND	ND	ND	ND	46.9	ND	NS	NS	NS	ND
Benzene	1	1	ND	**1.7**	0.34 J	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	3	50	ND	16.1	17.2	6.1	ND	ND	ND	ND	ND	ND
Chloroethane	10	2800	ND	ND	ND	3.8 J	ND	ND	ND	ND	ND	ND
Chloromethane	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	0.19 J	ND
1,2-Dichlorobenzene	5	24	ND	1.6 J	2.0 J	0.36 J	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	70	ND	ND	ND	0.84 J	ND	ND	ND	ND	ND	ND
Methylene Chloride	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.6
Naphthalene	10	21	ND	2.4 J	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1	1000	ND	0.46 J	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	1	0.015	ND	ND	0.99 J	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	4	530	ND	1.5 J	ND	ND	ND	ND	ND	ND	ND	ND

SWSL = NC Solid Waste Section Reporting Limit
NC2L = North Carolina Groundwater Standard (15A-NCAC-2L).
* = No listed NC2L standard, listed value is the GWPS.
GWPS = groundwater protection standard.
Shaded = Result > SWSL **Bold = Result > NC2L or GWPS**

All results in µg/L (ppb).
ND = Not detected above the laboratory detection limit.
J = Estimated concentration above the laboratory detection limit but below the quantitation limit.
B = Blank-qualified detection.
NS = Not sampled during the sampling event.